

Pro Series

Industrial Router

UR32

Milesight

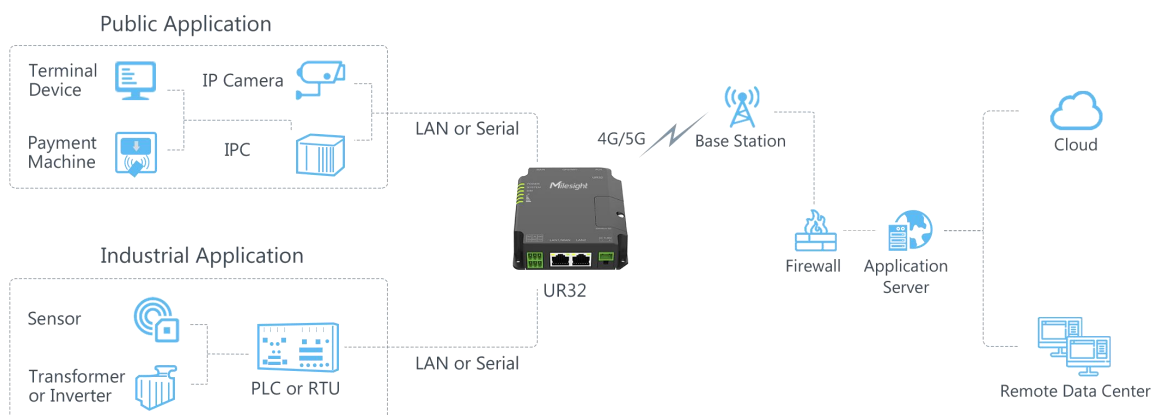


UR32 is a cost-effective industrial cellular router with embedded intelligent features that are designed for multifarious M2M/IoT applications. Global WCDMA and 4G LTE carrier supported make this drop-in connectivity a great help for operators in maximizing uptime.

Integrating embedded cellular modem and dual SIM function, the UR32 provides 3G/4G cellular network with maximum 150 Mbps download and 50 Mbps uplink, it also has 2 fast Ethernet ports and supports Wi-Fi that compliance with 802.11b/g/n standard. All these capabilities deliver users an uninterrupted internet access.

Easy deployment and comprehensive remote device management makes UR32 versatile in most of IoT/M2M applications.

◆ Application Example



◆ Benefits

- NXP industrial grade processor
- Global 4G LTE CAT4/3G network with dual SIM cards for backup between multiple carrier networks
- Multiple APN interfaces for simultaneous access to different network services
- Embedded Python SDK for secondary development
- Flexible modular design provides users with different connection modules like Ethernet, I/O, serial port, Wi-Fi, GPS for connecting diverse field assets
- Rugged enclosure, optimized for DIN rail or shelf mounting
- 3-year warranty included

◆ Security & Reliability

- Automated failover/failback between Ethernet, Cellular (dual SIM) and Wi-Fi
- Secure transmission with VPN tunnels like IPsec/OpenVPN/GRE/L2TP/PPTP/DMVPN/WireGuard/ZeroTier
- Embeds hardware watchdog to automatically recover from various failures, ensure highest level of availability
- Establishes a secured mechanism on centralized authentication and authorization of device access by supporting AAA (Radius, TACACS+, LDAP, local Authentication) and multiple levels of user authority

◆ Capabilities

- Link remote devices in an environment where communication technologies are constantly changing
- Support 802.11 b/g/n, as AP or client mode, to establish versatile wireless network or be the backup WAN link for 4G/3G
- Support rich protocols like SNMP, TR069, MQTT, Modbus bridging, RIP, OSPF
- Provide power to 802.3af/at PoE devices and support power management (optional)
- Support wide operating temperature ranging from -40°C to +70°C/-40°F to +158°F

◆ Easy Maintenance

- DeviceHub and Milesight Development Platform provides easy setup, mass configuration, and centralized management of remote devices
- The user-friendly web interface design and more than one option of upgrade help administrator to manage the device as easy as pie
- WEB GUI and CLI enable the admin to achieve simple management and quick configuration among a large quantity of devices
- Efficiently manage the remote routers on the existing platform through the industrial standard SNMP and TR069

◆ Hardware Specifications

Hardware System

| | |
|--------------------|---------------------------------|
| CPU | ARM Cortex-A7, 528 MHz |
| Memory | 128 MB DDR3 RAM and 128MB Flash |
| Extendable Storage | 1 × Micro SD Slot |

Cellular Interface

| | |
|-------------------|--|
| Network | 4G LTE (CAT 4)/WCDMA/GSM (Differ as regions) |
| Antenna Connector | 2 × 50 Ω SMA Connectors (Center PIN: SMA Female) |
| SIM Slots | 2 × SIM Slot (Mini SIM-2FF), 1.8V/3V |
| Tx Power | LTE: Class 3 (23 dBm ± 2 dB) |

Ethernet Interface

| | |
|--------------------|--------------------------------------|
| Numbers | 2 × RJ45 10/100 Mbps |
| Property | 1 × WAN + 1 × LAN or 2 × LAN |
| Mode | Full or half duplex (Auto-Sensing) |
| Ethernet Isolation | 1.5 kV RMS |
| PoE (Optional) | 2 × 802.3 af/at PoE PSE on LAN Ports |

Wi-Fi Interface (Optional)

| | |
|-------------------|--|
| Antenna Connector | 1 × 50 Ω SMA Connector (Center PIN: RP-SMA Female) |
| Standards | IEEE 802.11 b/g/n, 2.4GHz |
| Tx Power | 802.11b: 16 dBm +/-1.5 dBm (11 Mbps) |
| | 802.11g: 14 dBm +/-1.5 dBm (54 Mbps) |
| | 802.11n: 13 dBm +/-1.5 dBm (65 Mbps, HT20/40 MCS7) |

GNSS (Optional by Region)

| | |
|----------------------|---|
| Antenna Connector | 1 × 50 Ω SMA Connector (Center PIN: SMA Female) |
| Technology | GPS/GLONASS/BDS/Galileo/QZSS |
| Positioning Accuracy | 2.5m CEP (Open Air) |

Serial Port

| | |
|-----------|-------------------------------------|
| Numbers | 1 × RS232 (RS485 Hardware Optional) |
| Connector | 3.5mm Terminal Block |
| Baud Rate | 300bps to 230400bps |

DI/DO

| | |
|---------------|-------------------------------------|
| Numbers | 1 × DI + 1 × DO, Galvanic Isolation |
| Connector | 3.5mm Terminal Block |
| Digital Input | Dry Contact |

| | |
|-------------------------------------|---|
| Digital Output | Wet Contact, maximum 0.3A@30VDC |
| Others | |
| Reset Button | 1 × RESET |
| LED Indicators | 1 × POWER, 1 × SYSTEM, 1 × SIM, 3 × Signal strength |
| Power Connector | 1 × 2-pin 5.08 mm Terminal Block, with Surge-Protection and Reverse Polarity Protection |
| Built-in | Watchdog, Timer |
| Power Supply and Consumption | |
| Power Input | 9-48 VDC (48V is needed for PoE output) |
| Power Output (Optional) | 2 × 802.3 af/at PoE PSE on LAN Ports Per Port 30W Max., Total 60W Max. |
| Power Consumption | Typical 1.9 W, Max 2.4 W (In Non-PoE mode) |
| Physical Characteristics | |
| Ingress Protection | IP30 |
| Housing & Color | Metal, Black |
| Weight | 271 g |
| Dimension | 108 x 90 x 26 mm (4.25 x 3.54 x 1.02 in) |
| Installation | Desktop, Wall or DIN Rail Mounting |
| Environmental | |
| Operating Temperature | -40°C to +70°C (-40°F to +158°F) Reduced Cellular Performance Above 60°C |
| Storage Temperature | -40°C to +85°C (-40°F to +185°F) |
| Relative Humidity | 0% to 95% (non-condensing) at 25°C/77°F |
| Approvals | |
| Regulatory | CE, FCC, RCM, NBTC, JATE, Telec |
| Carrier | Verizon |
| Environmental | RoHS |
| EMC | EN 55032, EN 55035 |
| EMS | IEC 61000-4-2 Level 3 |
| | IEC 61000-4-3 Level 2 |
| | IEC 61000-4-4 Level 2 |
| | IEC 61000-4-5 Level 2 |
| | IEC 61000-4-6 Level 3 |
| | IEC 61000-4-8 Level 1 |
| | IEC 61000-4-11 Level 3 |

| | |
|-----------------|---|
| Radio Frequency | EN 301 489-1/17/19/52, EN 301 511, EN 301 908-1/2/13, EN 303 413, EN300 328 |
| Safety | EN62368-1 |

◆ Software Specifications

Network

| | |
|-------------------|--|
| Network Protocols | IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QoS, SNTP, Telnet, VLAN, SSH, MQTT, MQTTS, TR069, etc. |
| Routing | Static Routing, Priority Based Routing, RIP, OSPF |
| DDNS | Supported >16 service providers, others can be configured manually |
| QoS | Upload/Download Bandwidth Limit |
| IP Passthrough | Support to assign Cellular IP address to the device |
| Reliability | VRRP, WAN Failover, Dual SIM Backup |
| Diagnostics Tools | Ping, Traceroute, TCPDUMP, QXDM, Log Server, Cellular AT Command Debugger, Firewall iptables Debugger |

Wi-Fi Interface (Optional)

| | |
|-------------|---|
| Modes | AP or Client mode |
| Security | WEP/WPA-PSK/WPA2-PSK/WPA-EAP/WPA2-EAP authentication, TKIP/AES encryption |
| Wi-Fi Users | Up to 15 simultaneous connections |
| MAC Filter | Blacklist, Whitelist |

GNSS (Optional by Region)

| | |
|----------|---|
| Protocol | NMEA0183, PMTK |
| Mode | Support reading by Serial Port, MQTT, TCP Client/Server, UDP Server |

Security

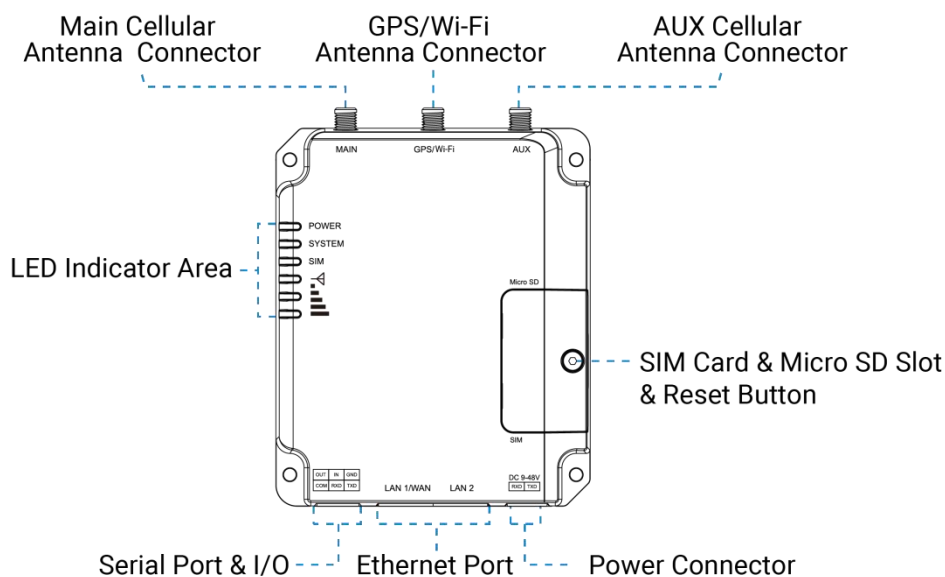
| | |
|----------------------|--|
| Firewalls | Access Control, DMZ, Port Mapping, MAC Binding, SPI Firewalls, DoS&DDoS Protection, Filtering(IP&Domain) |
| VLAN | Port and tag-based VLAN separation |
| AAA | Radius, Tacacs+, LDAP, Local Authentication, 802.1x |
| Multilevel Authority | Multiple Levels of User Authority |

VPN

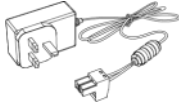
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|---------|---------------------------------------|
| OpenVPN | Multiple Clients and a Server Support |
| IPsec | Multiple Clients and a Server Support |
| GRE | GRE Tunnel Support |

| | |
|-------------------|---|
| L2TP | L2TP Client Support |
| PPTP | PPTP Client Support |
| DMVPN | DMVPN Spoke Support |
| WireGuard | Support |
| ZeroTier | Support |
| Others | |
| Serial Mode | Transparent(TCP Client/Server, UDP Server, MQTT Client), Modbus Server/Client, Modbus Gateway (Modbus RTU to Modbus TCP), DLMS Client |
| Digital Input | Support reading by SMS, Email, CLI, Modbus TCP/RTU Server, MQTT |
| Digital Output | Support triggering by DI, SMS, CLI, Modbus TCP/RTU Server, MQTT |
| App | Python SDK |
| Management | |
| Configuration | Web, CLI (SSH/Telnet), SMS, On-demand dial up, SNMP v1/v2c/v3, TR069, DeviceHub, Milesight Development Platform, HTTP(s) API |
| Update | Web, DeviceHub, Milesight Development Platform |
| Device Management | DeviceHub, Milesight Development Platform, MilesightVPN |
| SNMP | SNMP v1/v2/v3, Support SNMP Trap |
| TR069 | Support |
| SMS | Send/Receive SMS, SMS Control, SMS Configuration |
| Event Alarm | System Restart/Reboot, Network Up/Down, Link Switch, etc. |

◆ Hardware Overview



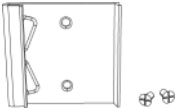
◆ Accessories



1 × Power Adapter



1 × 6-Pin Pluggable Terminal



1 × DIN Rail Clip Kit



4 × Wall Mounting Kits



2 × Magnetic Cellular Antennas



1 × Wi-Fi Antenna
(Wi-Fi Version Only)



1 × GPS Antenna
(GPS Version Only)



2 × Stubby Cellular Antennas
(Optional)

***Note:** Contact us if you need any other special accessories or customized accessories.

◆ Dimensions(mm)

